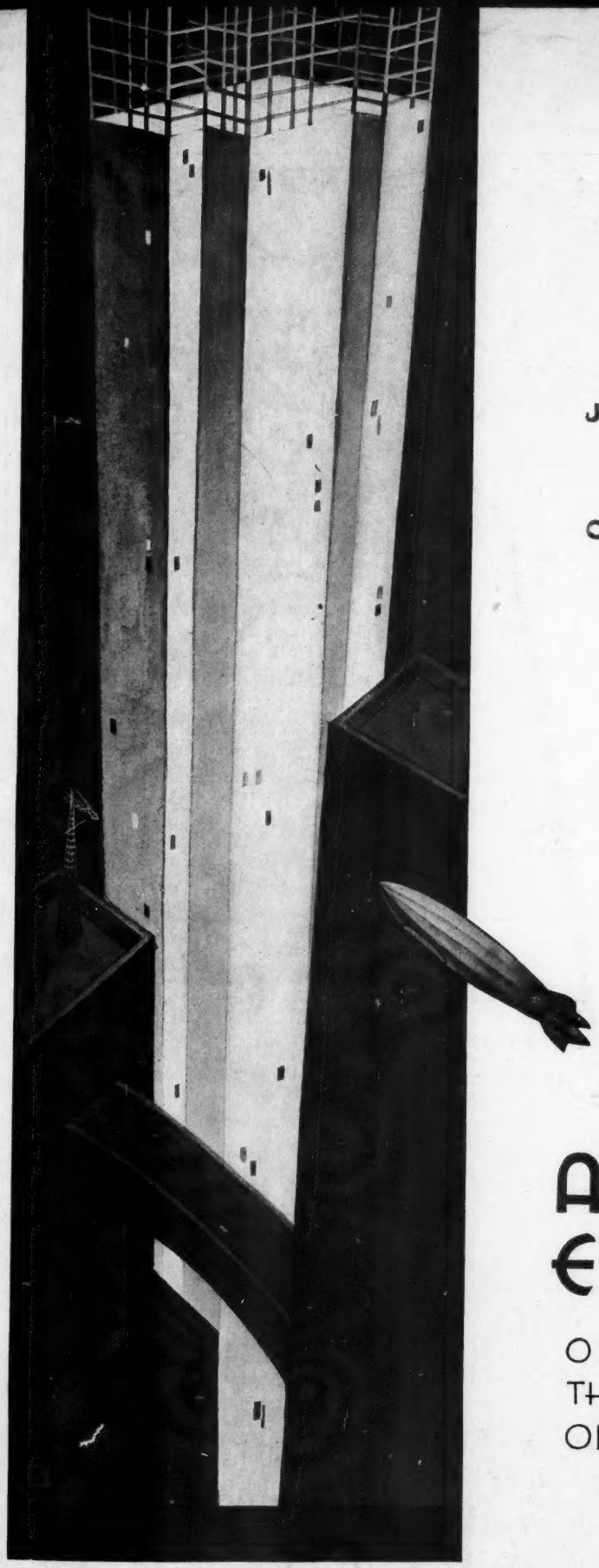

J. M. W. ✓
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The AMERICAN ENGINEER

OFFICIAL PUBLICATION
THE NEW YORK STATE SOCIETY
OF PROFESSIONAL ENGINEERS

SEPTEMBER + 1931

METHOD OF TRANSFERRING LOAD OF 300 Tons
FROM ORIGINAL TRUNNION POST COLUMN TO NEW MEMBERS
JACKING EQUIPMENT SUPPORTED ON
DIAPHRAMS ENTIRELY ARC WELDED
STRATFORD AVE. BRIDGE
BRIDGEPORT CONN
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METHOD OF TRANSFERRING LOAD OF 300 TONS FROM ORIGINAL TRUNNION POST COLUMN TO NEW MEMBERS.

DIAPHRAMS ENTIRELY ELECTRIC WELDED

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THE AMERICAN ENGINEER

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OF
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THE AMERICAN ENGINEER

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THE CAUSE OF THE ENGINEER'S PLIGHT

Indifference and Opposition

The amusement derived by an engineer correspondent whose letter, appended herewith, appeared in the August 1st issue of the Electrical World, and the sympathy therewith expressed by a subsequent epistler of that publication, is a sad commentary upon the interest manifested in public and professional welfare by so many engineers.

Were either of the gentlemen in the position of some engineers whose practice of years has been arbitrarily taken from them as a result of legislation sponsored by other professions, one is inclined to believe that their prevailing humors would be neither amusing nor sympathetic. When lawyers, doctors, architects, accountants and others whose fields of endeavor bring them into contact with engineers, promote legislation defining their provinces of practice in such a manner as to deprive the engineer of his legitimate field of endeavor it is not an occasion for levity upon the part of the engineers affected nor upon the part of the public which pays the price of unwarranted restriction in the interest of one profession as against another.

To date specialists in the electrical branch of engineering have not had the problem brought home to them in the same manner as structural, sanitary and industrial engineers have. However, the time is nigh. Even now electrical engineers cannot assume the role of principals on many projects but must work as employees of architects and, if certain objectives of architects are attained, all companies, corporations, and firms (regardless of what field of engineering they engage in) that design or build structures will be required to have architects in charge. The proposed building code for the City of New York, whilst recognizing mechanical and structural specialists as engineers, makes no provision for electrical engineers.

Until a year ago, aside from the efforts of a few individual members of the electrical branch of the profession, the only attempt to maintain the professional status of every engineer, regardless of specialty, came from those who refused parity with other professions at the price of sacrificing electrical, mechanical and chemical engineers. The so-called civil engineering group has borne the brunt of a fight to insure recognition as professional men for all engineers.

The splendid support and counsel given by the American Institute of Electrical Engineers during the past year stands forth as one of the outstanding accomplishments of those who have sought to awaken the entire calling to a realization of its precarious position and is the most promising ray of hope for the unity and protection of the profession that has appeared in a long time. Together with the A. S. C. E., which has for several years splendidly supported the efforts to secure recognition and protection for the profession, the A. I. E. E. now stands forth as a beacon showing the way to the A. S. M. E. and the A. I. Ch. E.

The Editor of Electrical World is to be commended for his splendid reply to Mr. M. M. Samuels. The latter might ask Chas. E. Hughes, Samuel Untermeyer, Elihu Root and a few other members of the profession of law, or the Brothers Mayo, Royal S. Copeland, John F. Erdmann, and others of the medical profession, if they consider their licenses of such little import as to be placed in the category of a license to keep a dog. As for the question of P. E. it might be interesting to note that an attorney who placed a scholastic title, such as L.L.B., against his name would be recognized at once as a tyro. Men of accomplishment in any profession do not incline to the use of such designations.

When the correspondent asks of what value is the license one wonders how and where he has been practicing his profession these past few years. Is he aware that hundreds have been compelled to

cease attempting to practice engineering because they were unlicensed? Does he know that he cannot legally collect a fee for professional services if he is not licensed and that the courts have so decided in several instances? (Attention is directed to p. 18 of the February issue of THE AMERICAN ENGINEER—The License Law in Effect). Does he realize that the New York State Society of Professional Engineers and the State Department of Education invite information regarding persons attempting to practice without a license, and that cases are continually being investigated? Does he not know that many firms and corporations engaged in various and sundry activities throughout the State who had appropriated the word engineer in divers forms have ceased to use that term and have substituted other designations as a result of the efforts of the New York State Society? (An appropriate example in this instance is the Stromberg Carlson Co.) Is he not advised that the City of New York with its thousands of engineering employees requires every Assistant Engineer to have a license? Does he not know that legislation throughout New York, affecting State, Municipality and County, frequently refers to and stipulates that engineers shall be licensed? As an example, attention is called to the Act creating the Department of Sanitation for the City of New York, in which department one of the three commissioners must be "a professional engineer licensed under the laws of this State."

It is possible to continue indefinitely with evidences that indicate the correspondents of the Electrical World are out of touch with conditions and may one day be rudely awakened.

A resume of causes and conditions compiled by C. J. Ullrich and published by the American Association of Engineers in 1929 offers interesting reading matter to those who are indifferent to or oppose licensing or registration.

The question of plumbers' licenses and dog licenses does not seem to perturb the lawyer and the doctor, and the engineer has a long way to go before he will be publicly recognized as are those licensed to practice the legal and medical professions. After all, it is not the question of who has a license, but rather one of prosecuting those who may be unable to comply with, or who think themselves above, the law of the State. As to improving the ability and morality of men, no one pretends that licensing does so directly. Indirectly it does, because it eliminates many evidently lacking those qualifications and thus raises the average. When a person states that incompetent and mediocre persons often secure licenses he admits the weakness of his case. *Often* and *always* are not the same and without the requirement of a license *always* prevails. In the second place he fails to appreciate that, as was true with law and medicine when licenses first were granted, many who were making a living had to be legally admitted to practice, but that has disappeared entirely with the years in those professions and will in engineering when all young men are required to qualify before a legally constituted authority.

In concluding one cannot fail to comment upon the necessity for the New York State Society of Professional Engineers and the field of missionary work that lies before it. Such indifference and opposition as are noted in the letters to the Electrical World are the handicaps under which it works when contending against other callings, the proposals of which would injure the very persons whose criticism or apathy makes possible discriminatory legislation. In the final analysis registration, yes the profession itself, is what the engineer makes of it. Others will do nothing to help and those within who do as little should indulge in a mite of introspection. Indifference and criticism are the surest roads to a goal marked "finis" and a tablet which reads "In Memoriam."

Electrical World Aug. 1st, 1931

Engineer's License, Plumber's License and Dog's License

To the Editor of the ELECTRICAL WORLD:

I was very much amused by your editorial in today's issue on engineers' licenses and the exaggerated importance that you attribute to them. I have had one since they were started in the state of New York. I believe I paid $25 for it; since then I have been paying $1 a year. I was even induced to acquire a seal, which I supposed would put me on a par with those great men who are known as notaries public or commissioners of deeds. I have been actually engaged in engineering through all these years and I have yet to find out what to do with that license. I doubt very much if it raises the standard of an engineer. On the contrary, it lowers it; it puts him on a par with the possessor of a plumber's license or a dog's license.

If a man puts P. E. after his name it is known at once that he didn't graduate and has no engineering degree. Will the editor kindly tell me if he is the proud possessor of a license and what he does with it?

M. M. SAMUELS.

New York,

If the editor were engaged in engineering practice he would have a license, he would deplore the present status of registration, he would conspire to elevate its public significance and professional import and hope by this route to lift engineering practice out of trade levels and into professional respect.—EDITOR.

THE ENGINEER PUT TO THE TEST

A. S. M. E. has Grave Responsibility

The Press of September 10th carried announcements to the effect that Henry L. Doherty, public utility magnate and part owner of the Kansas City Journal Post, had taken literally the expression by Roy V. Wright, President of the American Society of Mechanical Engineers, to the effect that engineers, if given the time and $500,000, could devise a means of relieving the depression that grows daily more serious. Mr. Doherty has established a fund of $500,000 to be used by the A. S. M. E. in seeking a solution of the troublesome problem.

President Wright has been challenged to make good his assertions concerning the engineer's ability to solve the economic problem facing this country. This challenge affords an opportunity to prove that his contention is correct and that the engineer's usefulness to mankind is not confined to the practice of his own profession. He is possessed of as much imagination, as much resourcefulness and as much ability to execute plans for and direct humanity as any other member of society. In addition he has the knowledge to scientifically analyze and test his theories.

What plan, if any, Mr. Wright may have in mind has not been divulged but the Editor of this publication takes the liberty of bringing to his attention the proposal which appeared in the July issue of THE AMERICAN ENGINEER. The crisis now confronting England and the imminent danger of violence in tnis country, unless some plan capable of immediate and continued execution is shortly effected, prompt repetition of the proposal referred to. The plan is in substance as follows:

Enroll every wage earner and recipient of an income in the United States.

Ascertain the income of every person in the United States.

Tax every income in the United States a specified amount, based on a graded percentage, increasing with the income.

Collect this tax every month.

Compel every person to report to a draft Board at stated intervals.

Allow no exemptions.

Create a cabinet office to be known as the Department of Public Works.

Place in charge thereof a man comparable in ability to General Pershing and who would for the period of emergency have the powers of a General. (Until such office, which is a permanent need of the country, could be legally effected an Emergency Board could be created and accorded the same authority).

Immediately begin such construction as is ready for execution and prepare for and plan: the building and maintaining of highways, waterways, power projects, hospitals, schools, sanitariums, libraries, public buildings, bridges, tunnels, river and harbor improvements; the reclamation and irrigation of land, and countless other projects useful and necessary to the people of the United States.

Continue to draft the incomes and to carry on the projects mentioned until the emergency shall have been concluded and prosperity restored.

Such a program despite its imperfections is practicable and is less costly and less difficult of execution than the conduct of a great war. It has many advantages over the unco-ordinated efforts that are the topic of frequent discussion by States, cities and private corporations. Also it avoids the difficulty of borrowing money and increasing the national, state and city debts and eliminates the undesirable element wherein those who are possessed of the wealth to lend great sums, reap enormous harvests on safe investments and actually make no sacrifices. Under any conditions, borrowed money must be paid by the people in some form of tax. Why not eliminate the middleman?

England today faces a condition wherein income taxes run to 25% and up of one's earnings. She has borrowed and borrowed and must pay back. Let America avoid her plight.

An average tax of far less than 25% would provide all the money necessary to put to work and keep there, at a living wage, every unemployed person in the entire United States.

Charity is not wanted. The time has come for the government to intervene and make unnecessary most charity organizations and drives. There is no objection to solicitation for projects desirable but not necessarily indispensable. In the case of the latter, solicitation of funds should be unnecessary and most of the so-called charity organizations and drives which spend more in administering to themselves than to others should be prohibited. The country today suffers from an ailment misnamed "charity." It is making professional beggars of children and fostering ideas inimical to character and to citizenship. Let us end big business masquerading under the guise of charity. Every citizen would benefit by paying more to the government and less to so-called charity. Finally, the remarks of Senator Borah are not idle words. "Those who have money will have to take care of those who are in distress, whether willingly or otherwise." This is not a threat. It is a solemn warning predicated upon common sense born of the experiences of mankind in the past. Now is the time to prevent ideas and doctrines inimical to American Institutions from becoming realities.

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ASTRONOMY

A Brief Story Thereof

Astronomy has often been referred to as the noblest, most beautiful and most perfect of sciences. Nothing low or mean has ever been associated with the subject which treats of the heavenly bodies and the laws which govern their existence. It is generally conceded to be the most ancient of all sciences, though not all that has been promulgated in its name can be considered as belonging in the category of true science.

The study of the stars is, without doubt, as old as man himself and, as a result, many of the discoveries in astronomy date back of authentic records, amid the mysteries of tradition. Long before recorded history, primitive peoples sowed, reaped and held their religious ceremonies at times determined by phases of the moon and the locations of heavenly bodies. Knowledge of the stars enabled savage peoples to penetrate forests, cross deserts and traverse large bodies of water. Early writings, still extant, abound with references to astronomical data and reveal a knowledge that must have required centuries to accumulate.

Chinese records give an account of a conjunction of four planets and the moon, which, according to authorities, must have occurred a full century before the flood. The same Chinese also possess the first record of an eclipse of the Sun, which took place about two hundred years after the deluge. According to history two Chinese royal astronomers were executed about 2100 B. C. for failing to observe an eclipse with proper rites. Over 1000 years B. C. the Chinese determined the obliquity of the ecliptic.

The Chaldean shepherds, watching their flocks by night, under the open sky, could not fail to become familiar with many movements of the celestial bodies. The Chaldeans invented the sundial and discovered the "Saros" or Chaldean Period, which is the length of time in which the eclipses of the sun and moon repeat themselves in the same order.

It is generally believed that the present division of the visible stars into constellations was first made by the Babylonians about 3000 B. C. The Egyptians and Chaldeans both recorded the length of the year as 365¼ days. To the Greeks, however, as with mathematics, must go the credit for placing astronomy within the realm of science.

Thales, (about 640-540 B. C.) who was noted for his electrical discoveries and was one of the "seven wise men" of Greece, systematized and extended the knowledge of the Chaldeans and Egyptians. He founded the first school of astronomy in Greece. He taught that the earth is round and that the moon receives its light from the sun. He also divided the earth's surface into zones and introduced the theory of the ecliptic into Greece. History tells of an eclipse that he predicted, memorable because it terminated a war between the Medes and Lydians. The armies of these nations were engaged in a fierce struggle when the sudden darkening of the sun caused both sides to throw down their arms and make peace.

Anaximander and Anaxagoras were pupils of Thales. Anaximander taught that the stars are suns and that the planets are inhabited. Anaxagoras maintained that there is but one God, that the sun is solid and about as large as Greece. He explained the eclipses and other celestial phenomena by natural causes. He and his family were condemned, on the charge of audacity and impiety, to eternal banishment by his own countrymen.

Pythagoras (about 580-500 B. C.) founded another celebrated astronomical school in Italy. He taught that the earth is a sphere. He explained the causes of the eclipses and calculated them by means of the Chaldean Saros. While he conceived of a system of the universe in many respects remarkably correct, he advanced no proof and his views were lightly considered. To him the sun was the center of the solar system and the planets revolved about it in circular orbits, although he refrained from publicly teaching this doctrine. He also believed:—that the earth revolved daily on its axis; that Venus is both morning and evening star; that planets are inhabited; that the planets are placed at intervals corresponding to the scale in music and that they move in harmony, making the music of the spheres, but that this celestial concert is heard only by the Gods, the earthly ear being too gross for such divine melody. He estimated the sun to be 44,000 miles from the earth and to have a diameter of 75 miles.

Pythagoras, unquestionaly a genius, was emphatically a dreamer. He is said to have attempted to calculate the size of some of the animals on the moon. Many of his conceptions have long since been forgotten. Here indeed was a companion suitable for a DaVinci, a Newton or an Einstein.

Philolaus of Crotona, a disciple of Pythagoras, believed the sun to be a glass dish reflecting the light of the Universe. He made the lunar month 29½ days, the lunar year 354 days and solar year 365½ days.

Plato and Aristotle also contributed to astronomy. Plato is said to have understood the causes of the eclipses and he believed that the celestial bodies moved in straight lines but that gravity changed their directions, compelling them to move in curves. Aristotle, perhaps the greatest compiler of information that ever lived, and undoubtedly one of the greatest minds, recorded his own observations and mentions an occultation of Mars

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A COMMENTARY ON PROFESSIONAL UNITY

A New Critic—But no New Arguments

Professional Solidarity and Separate Licenses is the heading under which is launched in the Engineering News-Record of September 3rd—a quixotic outburst against the Board of Direction of the American Society of Civil Engineers, as well as a criticism of the New York State Society of Professional Engineers and similar groups who have sought to consummate the unity of the engineering profession.

The article questions the sincerity and understanding of practising engineers whose professional reputations are such as will probably cause them to ignore the divigations of a contentious editorial. Neither the American Society nor its Board of Direction, which passed resolutions only after hearing and carefully studying arguments pro and con upon the subject of the unity of the profession, needs any defense from outside sources.

The attempt to justify dividing the engineering profession into groups savors more of spleen than of judgment. One wonders what system of philosophy might be elastic enough to comprehend the logic which pervades a polemic that begins by decrying platitudes and stock arguments and then proceeds to invoke them throughout.

The editorial would have one believe that pure altruism and concern for the public welfare prompt the tirade against the selfish motives ? and reprehensible nescience ? of those who profess a desire to have accorded engineering the same public understanding and recognition that accrues to those professions which, while possessed of equally as many subdivisions as engineering, have for obvious reasons maintained their unity before the law.

It takes but slight reflection upon the part of any one seeking justification for his opinion on the subject of a unified profession to realize that the practice of law differs to a greater or lesser degree in every community, state and nation under the sun, and, that human law itself is predicated upon agreements amongst mankind for its own protection and far more capable of definite restrictions and divisions than is a profession premised upon immutable natural laws and materials identical throughout the world. This is the view held by many despite the oft repeated stock arguments (so decried by the editorial) to the effect that engineering is different from other professions.

The reasoning which one moment abhors the idea that "the calibre of the engineering profession" could ever get "so low that jurisdictional disputes would arise" and the next contends that the public should be protected against a bridge engineer attempting to design or build an elevator merits little consideration. The arguments offered indicate how little the problem is appreciated.

That jurisdictional disputes have already arisen within the profession as well as with other professions is ignored by the editorial. That engineers should be sacrificed upon the altar of protective legislation sponsored by other professions, in order to justify the (altruistic?) opinions of persons who desire to see the profession of engineering so dismembered as to be impotent, either to serve itself or the public, is asking just a little more than can be expected of an engineer who is deprived of his rights as a professional man and of John Q. Public who is compelled to pay the bills of middlemen and persons who sell the services of others for profit.

Reference to patent trivial reasoning and intimation of selfish motives upon the part of the directors of a society nationally recognized and respected for seventy-seven years, or upon the part of a state society that pays no officers or dividends, is hard to justify when the same emanates from a business enterprise. It is hardly a magnanimous gesture upon the part of a publication which owes its existence to engineers and which purports to serve the profession of engineering.

As for the professional society of this state, it is primarily concerned with the public welfare, which, as the criticism suggests, is inseparable from professional welfare. Its purposes, its accomplishments and the absence of concern for the public welfare upon the part of existing agencies (including publications) are the reasons for its being. The constitution of the Society, an incorporated body, is predicated in the following terms: "Concerned with the Public Weal of the State of New York"

The fact that the New York State Society refrains from scientific and technical activities and devotes its endeavors toward raising the standards of ethics, increasing the requirements for practice, protecting the public from charlatans and incompetents and defending the profession from unwarranted legislative encroachments upon the part of other callings is sufficient evidence that there is a vital public and professional need for its existence.

The editorial asks "are we on firm ground when we argue that because John Jones, a specialist in bridge design, back in the dim past studied a little about electricity he should be authorized by law to design and build electric elevators." The New York State Society replies: "Is the legal profession on safe ground when it argues that because John Jones, a specialist in real estate law, back in the dim past studied a little about the criminal code, he should be authorized by law to defend a

(Continued on Page 16)

KANSAS REGISTRATION ACT

Passed at the last Legislative Session

Kansas, the last state to enact legislation regulating the practice of professional engineering, has placed the minimum age at which a person may be registered as twenty-eight. It also requires that he shall have at least ten years' experience of a character satisfactory to the Board. These are rigid requirements from the viewpoint of experience and a developed sense of judgment. However, no mention is made of the knowledge required of the applicant. After all, the object of registration or licensing, at least to date, in all professions is the determination of the fact that a candidate has character, training in the arts and sciences utilized in the practice of his profession and a reasonable amount of actual contact with professional practice. It is regrettable that Kansas did not stress more the knowledge required to assure engineering proper recognition in the public mind as a learned profession.

A most interesting and desirable feature of the law is that every applicant must subscribe to a code of ethics to be prepared by the Board. This is something New York needs in order that unethical practice shall become illegal practice.

Another essential feature is the right of a registrant to appeal to a court of proper jurisdiction in a case where he feels an injustice has been done. This is a fundamental principle that must appear in every license law if the law is to remain constitutional.

It is to be regretted that the proposed Uniform Law, sponsored by the Council of State Boards of Licensing, the national societies and other groups, was not available in its present shape at the time the legislation was sponsored. The failure to observe completely the unity of the profession is unfortunate. It is not possible to review the entire measure which is here printed for the information of engineers in New York.

Senate Bill No. 159.

By Senator TRIPP.

AN ACT providing for the registration of professional engineers, creating a state registration and examining board for professional engineers, defining its powers and duties, and providing penalties for the violation thereof.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. That in order to promote the public welfare, safeguard life, health and property, any person practicing or offering to practice professional engineering hereafter in this state may submit evidence that he or she is qualified so to practice, and may be registered as hereinafter provided.

SEC. 2. *Definitions.* The term "professional engineer" as used in this act means a person who, through technical knowledge gained by education and by experience, is qualified to practice one or more branches of professional engineering. The term "professional engineering" as used in this act means the investigation, planning, designing, and supervising of projects and structures when the proper performance of such services requires engineering knowledge. For the purpose of practicing professional engineering, no person shall represent himself as or use the title of registered professional engineer unless such person is qualified by registration under this act and has maintained his registration as provided in section 8.

SEC. 3. *State registration and examining board of professional engineers; appointment of members; terms.* A state registration and examining board for professional engineers is hereby created. The board shall consist of five registered professional engineers, who shall be appointed by the governor and shall have the qualifications required by section 5 of this act. The members of the first board shall be appointed within sixty days after the passage of this act, to serve for the following terms: Commencing July 1, 1931, one member for one year, one member for two years, one member for three years, and two members for four years, or until their successors are duly appointed and qualified. On the expiration of the term of any member, or members, the governor shall appoint for a term of four years a registered professional engineer, or engineers, having the qualifications required by section 5 of this act, to take the place of the member whose term on said board is about to expire. Each member shall hold office until the expiration of the term for which such member is appointed or until a successor shall have been duly appointed and shall have qualified.

SEC. 4. *Removal of board members—vacancies.* The governor may remove any member of the board for misconduct, incompetency, neglect of duty, or for any other sufficient causes. Vacancies in the membership of the board shall be filled by appointment by the governor for the unexpired term.

SEC. 5. *Qualifications of members of board.* Each member of the board shall be a citizen of the United States, and at least thirty-five (35) years of age, shall be a professional engineer or recognized standing, shall have been a resident of this state for at least three years immediately preceding his appointment, shall have had at least ten years of active engineering practice preceding his appointment, and during such time shall have had charge of engineering work as principal or assistant for at least three years, and shall be a member in good standing of a recognized state or national

engineering society: *Provided,* The responsible charge of engineering teaching in a recognized engineering school shall be construed as responsible charge of work. Not more than two members of the board shall be from the same branch of the profession of engineering.

SEC. 6. *Compensation and expenses of members of board.* Each member of the board shall receive the sum of five dollars ($5) per diem when actually attending to the work of the board or of any of its committees and for the time spent in necessary travel; and in addition thereto shall be reimbursed for all actual traveling, incidental, and clerical expenses necessarily incurred in carrying out the provisions of this act.

SEC. 7. *Registration of first board; certificate of appointment; oaths of members.* Each member of the first board shall receive, at the time of appointment, a certificate of registration as a "professional engineer" from the governor of this state. Each member of the board when appointed shall receive a certificate of appointment from the governor, and before entering upon the duties of the board shall take and subscribe to the oath required, which shall be filed with the secretary of his state.

SEC. 8. *Organization of board; meetings; officers; quorum; duties of secretary.* The board first appointed shall hold a meeting within thirty days after taking office and shall organize by election of a chairman, vice chairman, and secretary. The board shall hold at least two meetings each year and such special meetings as may be provided for in its by-laws, or as a majority of the members may desire. A quorum of the board shall consist of three members. The secretary shall keep on file a record of all certificates of registration granted and shall make annually such revisions of said record as may be necessary. In revising said record the secretary shall communicate annually by mail with every professional engineer registered hereunder. In every case in which a reply is not received within thirty (30) days after the date of the first letter, the secretary shall send a second letter by registered mail and the failure on the part of any engineer to reply within sixty (60) days from the date of said second letter shall operate to revoke his certificate of registration, but he may be reinstated at any time upon due application therefor and upon the payment of a registration fee of ten dollars ($10). He shall collect for the board an annual registration renewal fee of two dollars ($2) from each registered engineer. The secretary shall collect and account for all fees provided for by this act and pay the same monthly to the state treasurer, who shall keep such money in a separate fund to be known as the fund of the board of engineering registration, which shall be continued from year to year, which money is hereby appropriated for the year ending July 1, 1932, and the year ending July 1, 1933, and shall be paid out only for the expense and compensation of said board as provided in this act upon the warrant of the state auditor upon itemized vouchers approved by the chairman and attested by the secretary of the board: *Provided,* That ten per cent of all fees collected by said board shall be paid to the state treasurer and become a part of the state general fund.

SEC. 9. *Seal of board; by-laws and rules.* The board shall adopt and have an official seal. The board shall have power to make all the by-laws and rules, not inconsistent with the constitution and laws of this state, which may be reasonably necessary for the proper performance of its duties and the regulations of the proceedings before it. In carrying into effect the provisions of this act, the board may, under the hand of its chairman and the seal of the board, subpœna witnesses and compel their attendance, and also may require the production of books, papers, documents, etc. Any member of the board may administer oaths or affirmations to witnesses appearing before the board. If any person shall refuse to obey any subpœna so issued, or shall refuse to testify or produce any books, papers, or documents, the board may present its petition to the district court of the county in which it may be in session, setting forth the facts, and thereupon such court shall, in a proper case, issue its subpœna to such person, requiring his or her attendance before such court and there to testify or to produce such books, papers and documents, as may be deemed necessary and pertinent by the board. Any person failing or refusing to obey the subpœna or order of the said court may be proceeded against in the same manner for refusal to obey any other subpœna or order of the court.

SEC. 10. *Register of applications for registration; contents.* The board shall keep a record of its proceedings and a register of all applications (*a*) The name, age and residence of such applicant; for registration, which register shall show: (*b*) the date of the application; (*c*) the place of business of such applicant; (*d*) his educational and other qualifications; (*e*) whether or not an examination was required; (*f*) whether the applicant was rejected; (*g*) whether a certificate of registration was granted; (*h*) the date of the action of the board; and (*i*) such other information as may be deemed necessary by the board.

SEC. 11. *Records of board to be evidence.* The records of the board shall be *prima facie* evidence of the proceedings of the board set forth therein, and a transcript thereof, duly certified by the secretary of the board under his seal, shall be admissible in evidence with the same force and effect as if the original were produced.

SEC. 12. *Roster of registered professional engineers.* A roster showing the names, place of business and the residence of all registered professional engineers shall be prepared by the secretary of the board during the month of June of each year, commencing one year from the date this law becomes

effective. A copy of this roster shall be placed on file by the clerk of each county, city and town in this state and a copy mailed to each engineer registered.

SEC. 13. *Annual report.* Annually, as of July 1, the board shall submit to the governor a report of its transactions of the preceding year, and shall also transmit to him a complete statement of the receipts and expenditures of the board, attested by the affidavit of its chairman and its secretary.

SEC. 14. *Certificates of registration; qualifications of applicant.* The board, upon application on the form prescribed by it, and upon the payment of a fee of twenty-five dollars ($25), and except as hereinafter provided, shall issue to any person who submits evidence satisfactory to the board that he or she is qualified and experienced in the profession of engineering, a certificate of registration as a professional engineer in one or more of the following principal branches; civil, mechanical, electrical, architectural, mining and chemical. The board may authorize such additional classifications as may seem expedient: *Provided,* That no person shall be eligible for registration as a professional engineer who is not at least twenty-eight (28) years of age, or who does not speak, read and write the English language, or who is not of good character and repute, or who has not actively engaged for at least ten years in professional engineering work which practical experiences are to be of a character satisfactory to the board, and in keeping with the requirements for reciprocal registration with other states having registration laws. The character, training, and experience of the applicant shall in no case be less than that required for corporate membership in the American Society of Civil Engineers, American Society of Mechanical Engineers, American Institute of Electrical Engineers, or similar national engineering society covering the field of engineering in which he wishes to practice: *Provided,* That each applicant shall subscribe to a code of ethics to be prepared by the board, which code shall be similar in text and meaning to the code of the American Society of Civil Engineers.

SEC. 15. *Furnishing of additional evidence by applicants for registration examinations.* Applicants for registration, in cases where the evidence presented in the application does not appear to the board conclusive nor warranting the issuing of a certificate of registration, may be required to present, for the consideration of the board, further evidence, and may also be required to pass an oral or written examination or both, as the board may determine.

SEC. 16. *Majority of board to pass upon applications; return of registration fees.* A satisfactory character of the applicant shall be an essential, and majority vote of the members of the board shall be required to pass upon the qualifications of the applicant for registration as a professional engineer. Should the board deny the issuance of a certificate of registration to the applicant, the registration fee deposited, less ten dollars, shall be returned to the applicant. The board, after satisfactory examination or receiving other satisfactory evidence of qualification of the applicant, as provided in this act, shall issue a certificate of registration authorizing the applicant to practice as a professional engineer. The board shall impress upon each certificate of registration issued under this act the seal of the board. Each registrant shall be furnished with a suitable seal with a uniform inscription thereon formulated by the board, with which he shall stamp all plans, specifications, surveys and reports made or issued by him. A certificate of registration provided for in this act shall be presumptive evidence that the person named therein is legally registered.

SEC. 17. *Practice of firms, copartnerships, corporations and joint-stock associations.* A firm or a copartnership, or a corporation or a joint-stock association may engage in the practice of professional engineering in this state as registered engineers, provided such practice is carried on under the responsible direction of one or more registered professional engineers, whose name or names and seal or seals shall appear on all plans and other official documents issued in connection with such professional engineering practice.

SEC. 18. *Revocation of registration; procedure.* The board shall be the power to revoke the certificate of registration of any registrant who is found guilty of: (*a*) The practice of any fraud or deceit in obtaining a certificate of registration. (*b*) Any gross negligence, incompetency, or misconduct in the practice of professional engineering as a registered professional engineer. Any person may prefer charges of fraud, deceit, negligence, incompetency, or misconduct against any registrant. Such charges shall be in writing, and shall be sworn to by the person making them, and shall be filed with the secretary of the board. All charges, unless dismissed by the board as unfounded or trivial, shall be disposed of by the board within three months after the date on which they shall have been preferred. The time and place for said hearing shall be fixed by the board, and a copy of the charges, together with a notice of the time and place of hearing, shall be personally served on or mailed to the last known address of such registrant at least thirty days before the date fixed for the hearing. At any hearing the accused registrant shall have the right to appear personally and by counsel to cross-examine witnesses in his or her own defense. If, after such hearing, three or more members of the board vote in favor of finding the accused guilty of either: (*a*) The practice of fraud or deceit in obtaining a certificate of registration, or (*b*) any gross negligence, incompetency, or misconduct in the practice of professional engineering as a registered professional engineer, the board shall revoke the certificate of registration of such

(Continued on Page 17)

NEWS ITEMS

(From Here and There)

AMERICAN ASSOCIATION OF ENGINEERS ANNUAL CONVENTION

The Annual Convention of the American Association of Engineers will be held on September 28, 29 and 30 at Huntington, West Virginia.

Unemployment, Registration of Engineers, Engineering Education and co-operation with State Professional Engineering Societies are amongst the matters to be reported on by Committees for the consideration and decision of the convention.

The American Association has been a pioneer in the matter of recognizing the necessity for the solidarity of the profession. It sponsored the original registration legislation in almost every instance. No greater contribution to the welfare of the profession has ever been made by any society.

The decisions of the Huntington Convention will be of particular interest to the New York State Society which has for several years stressed the desirability of co-ordinating the efforts of Professional State Societies.

* * *

STATE BOARD OF EXAMINERS COUNCIL TO HOLD CONVENTION

The twelfth annual convention of the National Council of State Boards of Engineering Examiners will take place on October 1st, 2nd and 3rd in Detroit, Michigan.

Amongst the committee reports and discussions to be presented for consideration and disposition are: Reciprocal Registration; Uniform Registration Law; Procedures of Registration Boards; Engineering Schools; Examinations for Candidates; Registration Forms, and a Constitution and By-Laws for the Council.

The transactions of this meeting will be of the utmost importance to the profession of the entire country. Persons desiring to attend will receive personal invitations by applying to T. Keith Legare, President; of Columbia, South Carolina, P. H. Dagget, Secretary; College of Engineering, Rutgers University, New Brunswick, N. J., or, the New York State Board of Licensing for Professional Engineers, Albany, N. Y.

Headquarters for the meeting will be the Book-Cadillac Hotel.

The National Council of State Boards is perhaps the most potent engineering influence in the country and its deliberations will be watched with interest by engineers everywhere.

FARADAY CEREMONIES

The Faraday Centennial celebration was held in London, England, on September 21st, 22nd and 23rd.

It was in 1831 that Michael Faraday made known his discovery of electromagnetic induction. This son of a blacksmith, largely self-taught, who was one of the greatest geniuses of the electrical and physical world, has often been referred to as the creator of the age of electrical power.

Tributes to his ability and capacity were made by many of the worlds' famous scientists and statesmen.

The American Institute of Electrical Engineers participated in the ceremonies some of which were broadcast across the Atlantic.

* * *

CONSOLATION TO SURVEYORS?

The Press of September carried references to a method developed by Prof. E. V. Huntington of Harvard University for determining accurately the curvature and shape of the earth. It is claimed that the discovery will prove a boon to surveyors, particularly in the determination and location of land marks and boundary lines. The bases of Prof. Huntingtons' method are gravity and measurements made on the earths' surface. No mathematics, more advanced than calculus, is necessary and the distribution of the earth's matter is unimportant. (Surveyors please note the simplicity.) The press and the American Mathematical Society believe that Surveying includes such work. So does your Editor, but it is a difficult task to convince some people that surveying comprehends more than using a transit and tape. It is a branch of engineering comparable in scope and in requirements of knowledge with any other branch of the profession. Perhaps some day engineers and practitioners of surveying will realize the propriety of compelling the surveyor to give evidence of a complete engineering education before attempting to specialize in the branch of the profession known as surveying. Specialization, as in law and medicine, should predicate a broad basic training upon which a man may build experience into a temple of his choice.

* * *

DELAYED ACKNOWLEDGEMENTS TO THE A. S. M. E.

THE AMERICAN ENGINEER of February contained some statistics, furnished by President Steinman, through the courtesy of the Engineering Index Service of the American Society of Mechanical

Engineers.

Attention has been called to some slight errata as well as to a failure to properly acknowledge the source of the information.

THE AMERICAN ENGINEER gratefully accepts the corrections and expresses appreciation of the co-operative spirit of the Engineering Index Service. To the A. S. M. E. and to Messrs. L. W. Wallace and J. E. Hannum it acknowledges its indebtedness.

* * *

A CHAPTER ACTIVITY WORTHY OF NOTE

During the early part of September the Legislative Fund of the State Society was augmented by the sum of Two Hundred Dollars. This amount was received from the Westchester County Chapter and represented a contribution of One Hundred Dollars from that Chapter and a like contribution which was solicited by the Chapter from the Westchester Society of Civil Engineers.

The Westchester County Chapter has signally distinguished itself by this effort; it has not only paid its own tribute of devotion but it has further manifested its zeal by its missionary labors which were fruitful in securing pecuniary support from an independent organization of engineers.

The Westchester Society of Civil Engineers has given most eloquent testimony of its interest and approval of the legislative endeavors of the State Society to elevate the standards of license requirements and to establish defenses which will safeguard the solidarity of the profession. Its friendly act of cooperation has earned our most cordial appreciation.

The Westchester County Chapter has set up a high standard by which the accomplishments of other Chapters in this field of endeavor will be measured. It cannot be reached by some Chapters in the State but there are others whose efforts will, it can be confidently expected, closely approach the mark which has been so generously established.

This is an activity which the Chapters can engage in with material benefit to the engineers of the State and is one which is heartily recommended.

RAPHAEL J. SMYTH,
Chairman, Committee on Chapter Activities.

SOME MODERN INVENTIONS

Information Concerning their Origin

Because of their marked influence upon human existence certain inventions have been of especial concern to mankind. A few of the most important are:

Airplane or Aeroplane:

A heavier than air machine which flies because the moving air upon a surface inclined, at a small angle, to the wind, produces a lifting effect.

Orville and Wilbur Wright, of Dayton, Ohio, were the pioneers; Wilbur being the first to successfully fly a heavier than air machine.

A. Santos Dumont, a Frenchman, made several flights in a machine somewhat different from that of the Wrights. The tail, common to the French planes, was later adopted by the Wright Brothers.

Glenn H. Curtiss, an American, developed in 1911 and 1912 the hydro-airplane.

Airplanes are usually classified according to the number of supporting surfaces such as monoplanes, biplanes, triplanes and multiplanes.

Airships:

A dirigible balloon.

Non-controllable balloons were invented in 1783 by the Monogolfier brothers of France and an ascension was made in that same year by Pilatu di Rozier. The first dirigible was built in 1852 by Henri Giffard, a Frenchman, who drove a balloon by means of a steam engine at the rate of six miles an hour.

Santos Dumont, Renard, Krebs, Lebaudy Brothers, Parseval and Von Zeppelin were amongst the outstanding developers of the airship. Dumont made many important contributions to the science of aeronautics.

Automobile:

A self propelled four wheeled vehicle, designed to travel on roadways.

In 1769 N. J. Cugrot built a tractor driven by steam. Richard Trevithick, in 1801 constructed a steam coach and until about 1870 such conveyances were in use in Europe, particularly for sight seeing.

Siegfried Markus, a German, in 1875 built a gasoline automobile and is perhaps the inventor of the modern type.

Gottlieb Daimler is often referred to as the father of the automobile, because of the improvement he made in the gasoline engine, along about 1884. He and Carl Benz propelled bicycles and tricycles by means of gasoline in 1885.

George B. Seldon of Rochester, N. Y., applied in 1879 for a patent on a road vehicle driven by a gasoline motor. In 1895 the patent was taken out.

Panhard and Levassor, using the Daimler engine built the first commercially manufactured car in 1891. In 1893, at the Chicago Worlds' Fair there was displayed an imported Benz car.

Charles E. Duryea built the first American car in 1892. In 1893 Henry Ford and in 1894 Elwood Haynes built American cars.

The commercial manufacture of automobiles probably began in 1898 when a Winton was the first car to be sold. The first successful commercial Ford car was sold in 1903. Today it is estimated that there is about one car for every four people in the United States.

Barometer:

An instrument for measuring atmospheric pressure. It is particularly valuable in predicting weather changes and in measuring altitudes.

Torricelli, a pupil of Galileo, made the first barometer in 1643.

Water and mercury have been the most frequently used materials in connection with tube barometers. An ameroid barometer utilizing levers is also in common use.

Compass—(Mariner's):

A device for seeking and maintaining direction; the most important instrument employed in the navigation of ships. Two kinds, magnetic and gyroscopic are at present used. The former was invented in China about 1100 B. C. and was used in Venice about 1260 A. D. The most successful gyroscope compass is that perfected in 1910 by Elmer Sperry, American inventor.

Gyroscope:

A device for illustrating and utilizing certain laws of rotating bodies. The earth itself acts as a huge gyroscope, spinning on its axis which points to the pole star, also rotating about the sun.

The gyroscope was invented early in the 19th century. Leon Foucault utilized it in 1852 to demonstrate the rotation of the earth. Its most important application is perhaps the gyrocompass which indicates true north regardless of any change in the magnetic field.

Microscope:

An optical instrument composed of lenses and designed to magnify minute objects. The first microscope appears to have been made by a Hollander, Zaccharias Janssen about 1590.

From the microscope were developed combinations of lenses, particularly by another Hollander, Lippershey, which led to Galileos' telescope, constructed in 1608.

Motion Pictures:

A series of separate pictures projected upon a screen in such a manner as to give the appearance of continuous motion.

Edward Muybridge, in 1872, studied the movements of a trotting horse by means of a series of cameras arranged in a row and exposed as the horse passed.

In 1893 Edison invented the kinetoscope, which depicted motion by means of photographs printed on a continuous strip of celluloid film.

C. Francis Jenkins produced the first modern motion picture in 1894.

Edison produced the first commercial pictures known as Vitascope in 1896. In the same year Paul of London and Lumiere of Paris also exhibited motion pictures. Such was the beginning of one of the world's greatest industries.

Photography:

A process for forming and fixing images of objects upon a sensitized surface, by means of the physical and chemical properties of light.

In 1727 J. H. Schultz made the first photographic reproduction of some writing.

Thomas Wedgewood in 1802 copied pictures by the action of light. Joseph Nicephore produced permanent pictures in 1814. Louis Jacques Daguerre, in 1839, explained his daguerrotype, a process utilizing a silver plate sensitized with iodene, and developing with the vapors of mercury the image produced in exposure. This was probably the first real permanent reproduction of objects. In 1840 John W. Draper, famous professor of New York University, by means of this method photographed the human face for the first time. William H. F. Talbot, in 1841, used a calotype process which permitted making copies of a paper negative.

Subsequent to that time, Scott Aulin, R. L. Maddon, George Eastman, Hannibal Goodwin and others have developed modern photography and still later the efforts of Ives, Joly, Wood and the Lumiere brothers made possible colored photography.

Radiotelegraphy:

A method of transmitting electromagnetic signals without the use of wires.

In 1864 Clark Maxwell by mathematical investigation predicted the existence of electro magnetic waves. H. Hertz in 1887 proved the existence of these waves. Later Edward Branley and Oliver Lodge constructed instruments which detected them.

Guglielmo Marconi, in 1895, utilized the discoveries of previous scientists and is entitled to complete credit as the inventor of wireless or radiotelegraphy.

The first transatlantic message was sent in 1902. Today its use is world wide and together with radiotelephony it has become one of the world's most important activities.

Steam Engine:

A machine utilizing the expansive power of steam for the creation of energy and work.

Hero, of Alexandria, describes in 120 B. C. a toy which revolved by means of escaping steam.

Steam was used in the 17th century for pumping water. In 1705 Newcomen built for the same purpose an engine utilizing a piston.

James Watt in 1765 invented the condenser and later perfected a working engine.

Modern steam engines are in general of two types. The reciprocating engine and the steam turbine, the latter having been first used by DeLaval in 1879 and greatly improved by C. A. Parsons in 1884.

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The August issue of THE AMERICAN ENGINEER carried a reprint of that chapter, and a recommendation by the editorial staff that every engineer acquaint himself with Mr. Chase's viewpoint.

Talking Machine:

An instrument for recording and reproducing sounds.

The first machine called a phonograph, was produced by Thomas Edison in 1877. In 1885 Chichester Bell and Charles Tainter produced the graphaphone. Emile Berliner in 1887 constructed the gramaphone.

Telegraph:

A device for transmitting signals to a distant point.

The Ancients and the American Indians used lights and fires to transmit messages.

The heliograph and semaphore systems have long been in use throughout the world. Napoleon, through his topographical engineering corps, made much use of the semaphore method.

Modern telegraphy refers to the electromagnetic system which in simplest form comprises a line of wire.

Samuel F. B. Morse has been recognized by the Supreme Court of the United States as the inventor of the electro-magnetic telegraph.

Wheatstone and Cook, two Englishmen, invented a five word system, which was the first commercially used method. Joseph Henry, an American, in 1831, operated the first sounding electric telegraph. In 1837 Steinheil of Munich developed a similar method.

Telephone:

An instrument for carrying a voice from afar.

From antiquity various devices for propelling and magnifying the human voice have been attempted but no real success attended them until the application of electricity thereto.

On Feb. 14th, 1876, Alexander Graham Bell and Elisha Gray both filed applications in the U. S. Patent Office for patents in connection with the transmission of sound by electricity.

A patent was issued to Bell. A long legal battle ensued. Finally the granting of a patent to Bell was upheld and he has come to be considered as the inventor of the modern telephone.

The first exchange was built in New Haven, Connecticut, in 1878. Eight subscribers were found. Today a network of telephone wires covers the earth.

THE ENGINEER PUT TO THE TEST

(Continued from Page 5)

To the American Society of Mechanical Engineers one can only say—You have the greatest opportunity in the history of mankind, and also the greatest problem that you ever considered. May the spirit of Washington's Inaugural Speech be invoked by those who will be chosen to seek its solution.

ASTRONOMY

(Continued from Page 6)

by the moon and another of a star of the constellation Gemini by the planet Jupiter.

Eudoxus taught that the heavenly bodies revolve about the earth and that they are set like gems in hollow transparent crystal globes, the latter so pure that they do not obstruct the view.

Eratosthenes (about 270-190 B. C.) was the first to compute the circumference of the earth. He used the arc of a meridian—a most modern method, and his results were approximately correct.

Hipparchus (about 180-110 B. C.), who has often been referred to as the Newton of antiquity, was one of the most celebrated of the Greek astronomers. He taught that the earth is the center of the universe. He calculated the sidereal and tropical years within six minutes, discovered the precession of the equinoxes and made the first catalog of discovered stars—then 1081 in number.

One of the greatest of the astronomers of the ancient world was unquestionably Ptolemny (about 100-170 A. D.). He founded the astronomical system which bears his name. His celebrated treatise, the Almagest, remained the authoritative work on astronomy for 1500 years. He explained in detail the apparent motions of the sun, moon and stars by the theory that these bodies revolved about the earth in circles. (the geocentric system which held forth for so many centuries).

The advocates of the Ptolemaic theory conceived:—that a bar, or something equivalent, is connected at one end of the earth; that at some part of this bar, the sun is attached; that between that point and the earth Venus is fastened to a crank attached to the bar and that further on, Mercury is connected in the same manner. The nature of these bars, whether they were real or imaginary, apparently was not understood by them. However, they did comprehent their actions and so they supposed that the bar revolved, carrying the sun and planets along in a large circle about the earth; while the short cranks kept flying around, thus sweeping each planet through a smaller circle.

It was during this period of nearly 1500 years, wherein the Ptolemaic theory held sway, that astrology attained great prominence and was ranked as an important branch of knowledge. Star diviners were held in great estimation and the issues of important undertakings as well as the fortunes of individuals were foretold by means of a horoscope representing the positions of the planets and stars. Not only ignorant and superstitious persons accepted astrology; Lord Bacon was a strong believer.

During the middle ages, the Arabs, the Moors and the Tartars cultivated astronomy. The Tartar Prince, Ulugh Beg, a grandson of Tamerlane the Great, erected about 1420, an Observatory at Samarkand.

Copernicus (1473-1543) Polish mathematician,

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doctor and astronomer, sometimes referred to as the father of Modern Astronomy, promulgated the system which, while lately questioned in several quarters, displaced and has remained the successor to the Ptolemaic theory. In 1543 he revived the theory of Pythagoras by publishing his famous work entitled "De Revolutionibus Orbium Coelestium" and became the founder of the Modern Heliocentric system. He explained the motions of the sun, moon and stars by the assumption that the earth rotates on its own axis and revolves about the sun.

Tycho Brahe, a Dane, although opposing the Copernican theory made many important investigations which have since proved valuable. He was a pioneer in the matter of precision in observation and measurement.

The discovery of the laws of planetary motion:—(a) planets revolve in ellipses with the sun as a focus; (b) a line connecting the center of the earth with the center of the sun passes over equal areas in equal times; (c) the squares of the times of revolution of the planets about the sun are proportional to the cubes of their mean distances from the sun, by Kepler (1571-1630) a German; the invention of the telescope by Galileo, an Italian (1564-1642), and, the promulgation of the law of gravitation by Newton, an Englishman (1642-1727) confirmed the doctrines of Copernicus.

Since the days of Newton, the subject of astronomy has been developed to an extent which makes variations of seconds between calculations and observations a matter of concern. With the aid of the spectroscope, the chemical constitution and the physical properties of certain heavenly bodies have been determined to the satisfaction of astronomers generally. Upon the basis of such information numerous hypotheses as to the origin and evolution of the heavenly bodies have been postulated, and theories, many of them ephemeral, as to the existence of life thereon and the destiny thereof, have been advanced.

Over a period of 5000 years, mankind has learned much, but apparently it is only a small part of what is to be known. There still remains the greatest of all astronomical problems, one of engineering as well,—communication.

PROFESSIONAL UNITY

(Continued from Page 7)

man whose life is at stake? Again, is the medical profession on safe ground when it argues that because John Jones, a specialist in psychiatry, back in the dim past studied a little about surgery, he should be authorized by law to perform a major operation?" The law of the State says yes in both cases. Every profession has some sort of ethics and most professional men some sense of morality, and, being authorized (a better word would be permitted) does not indicate practice. The restrictions of licensing in any profession, are aimed at persons unable to gain legal admission to that

profession and not at members thereof. The purposes of licensing or registration are apparently not understood. Engineers of the future are no more likely to attempt practices beyond their qualifications than have been those of the past, nor than are members of other professions which have equally as many specialists practicing under one license. Many of us would prefer to be wrong with the law of the State of New York, supported by the experiences and opinions of professional men whose callings deal directly with the humanities, than right with those whose apparent understanding of the problem is on a par with the question "Is the same basic knowledge involved in the design of a bridge, an electric generator and a water purification plant?"

Perhaps practising engineers have a different conception of common basic knowledge. Those who design bridges, generators or water purification plants employ mathematics, physics, chemistry and materials of construction, to achieve their creations.

Platitudes may be poor arguments but those who find fault should avoid statements sans rime et sans raison.

KANSAS REGISTRATION ACT

(Continued from Page 10)

registered professional engineer. The board, for reasons it may deem sufficient, may reissue a certificate of registration to any person whose certificate may have been revoked, providing three or more members of the board vote in favor of such reissuance. A new certificate of registration, to replace any certificate revoked may be issued subject to the rules and regulations of the board. A charge of ten dollars ($10) shall be made for such issuance.

SEC. 19. *Appeals to court when registration is revoked.* Any registrant who shall feel aggrieved by any action of the board in revoking a certificate of registration may appeal therefrom to the court of proper jurisdiction, and after full hearing said court shall make such decree either sustaining the actions of the board or reinstating the certificate of registration of such registrants, as it may deem just and proper.

SEC. 20. *Reciprocal registration.* The board shall, from time to time, examine the requirements for the registration of professional engineers in other states, territories and counties, and shall record those in which, in the judgment of the board, standards not lower than those provided by this act are maintained. The board is hereby empowered to arrange for reciprocal registration of professional engineers in other states or countries, and to allow registered professional engineers from those states, territories and countries so recorded to register in this state under terms actually agreed upon. The board, upon the presentation to

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it by any person of satisfactory evidence that such person holds a reciprocal registration certificate issued to such person by proper authorities in any such state, territory, or country, shall, upon the payment of a fee of ten dollars ($10), issue to such person a certificate of registration and an official seal under this act.

SEC. 21. *Penalties.* Any person who shall practice or offer to practice professional engineering in this state as a registered engineer without being so registered, or any person presenting or attempting to use as his own the certificate of registration of another, or any person who shall falsely impersonate any other registrant of like or different name, or any person who shall willfully use or attempt to use a revoked certificate of registration, shall be guilty of a misdemeanor, and shall, upon conviction, be sentenced to pay a fine of not less than one hundred dollars ($100) nor more than five hundred dollars ($500), or to suffer imprisonment for a period not exceeding three months, or both.

SEC. 22. This act shall take effect and be in force from and after its publication in the statute book.

IMPORTANT NOTICE

To All Licensed Professional Engineers

ENGINEERING LEGISLATION IN NEW YORK

An Address by D. B. Steinman, M. A. S. C. E., President of the New York State Society of Professional Engineers

There will shortly be mailed to every professional engineer in the State of New York a copy in booklet form of the address of President Steinman delivered at Norfolk, on April 14th last, in connection with the Spring meeting of the American Society of Civil Engineers.

It is a plea that struck a most responsive chord and merits reading and reflection by all engineers.

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For some years, surveyors have witnessed with alarm, the growing tendency toward a lowering of professional standards in the practice of the profession. The risks taken in order to meet unfair methods of competition and fee cutting, and the consequent failure to execute work in accordance with high standards and specifications subscribed to by reputable practicing surveyors in this state have resulted in inadequate services and increased costs to the client.

Among the objects of the Institute are:

To encourage the practice of surveying as a profession.

To maintain ethical principles and practice and to promote a high professional standard among its members.

To advance the interests of surveyors in various branches of this profession.

To increase the usefulness of, and promote the protection for, the profession and the public at large, by means of adequate insurance.

The primary object of the Institute is to provide its membership with an insurance, which will indemnify the assured against loss resulting from legal action for any actual or alleged error or mistake.

The Institute was founded in Bronx County, N. Y. C., and sections or chapters are in the process of organization in various counties throughout the state.

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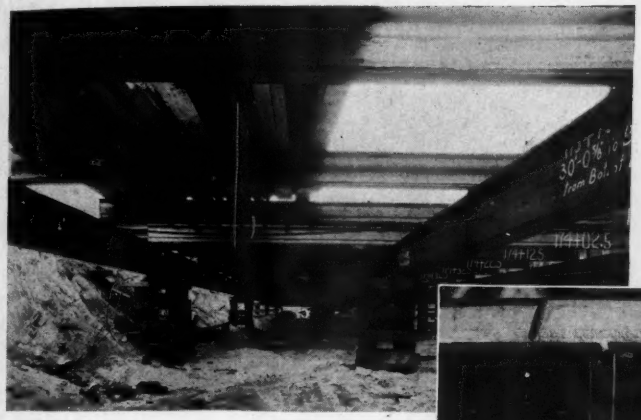

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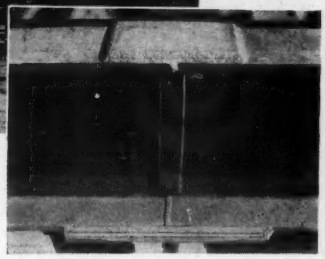

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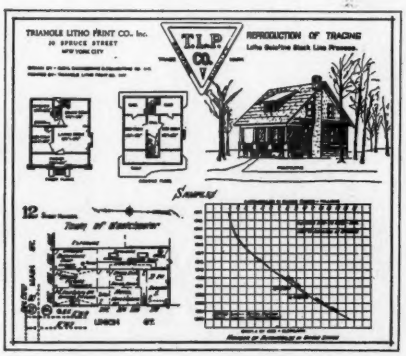

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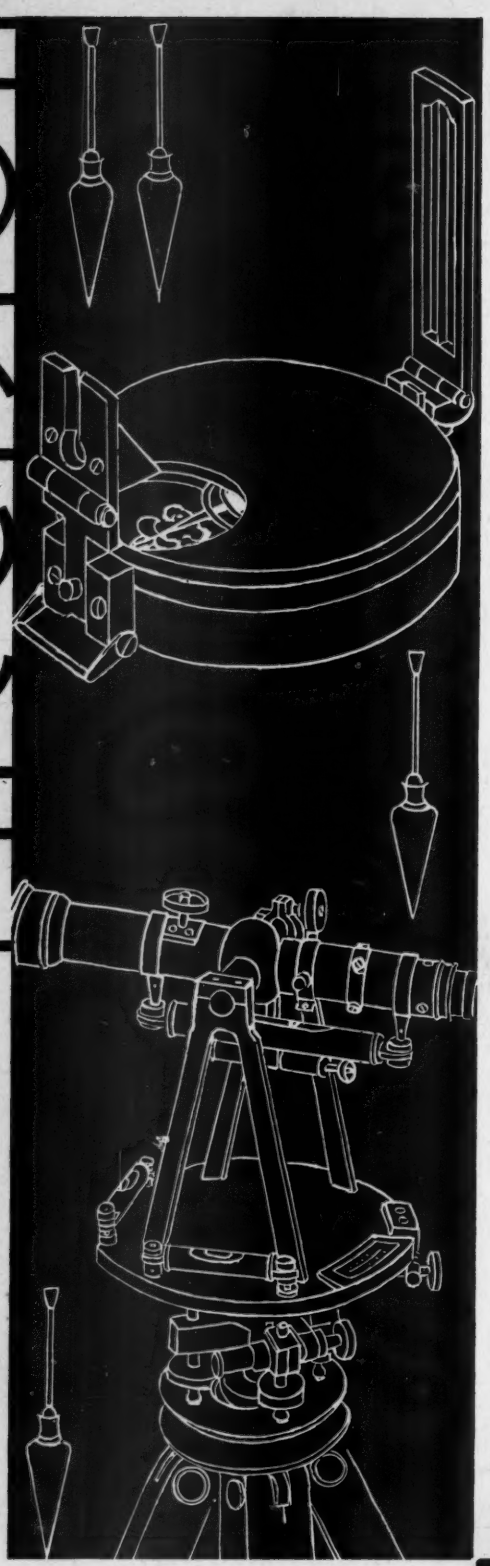

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